

REMARKS

The Applicant has carefully studied the Examiner's rejections and submits herewith an amendment wherein the main independent claim (claim 28) has been amended to better distinguish the claimed subject-matter over the prior art documents.

According to the subject-matter as claimed, each modular block of the device comprises two chambers as follows:

- the first chamber is formed by the recessed central part of a first spacer, and
- the second chamber is formed between two stacked plates or walls, and more precisely between a first plate or wall forming an exchange wall between the fluid of the first chamber and the fluid of the second chamber, and a second plate or wall which is an independent wall or a closed side wall of a second spacer.

In other words, each modular block according to the invention comprises at least a spacer and a stack of two plates.

According to another feature of the invention, each spacer and each wall or plate comprises two or three holes in both their upper and lower ends for supplying and collecting fluids. These features serve also to mount either serially, or in parallel, or serially and in parallel the first chambers of the device on one hand, and the second chambers of the device on the other hand.

The combination of features defined in independent claim 28 is not disclosed or suggested by the documents cited by the Examiner.

Romatier discloses a reactor having a stack of plates defining chambers therebetween (see for example figure 4). However, Romatier does not disclose a spacer according to the invention (i.e. having a recessed central portion and two or three holes for passage of the fluids at both of its ends).

Furthermore, the plates disclosed by Romatier are perforated at only one of their ends (see figure 8). To the contrary, each plate according to the invention comprises two or three holes at each of their ends. This feature allows mounting the chambers of the modular blocks either in parallel, or serially, or serially and in parallel. This is not the case with the reactor of Romatier wherein the chambers are linked serially (see the arrows in figure 1).

Berthou et al. disclose a resistive heater coupled to a heat exchanger. The resistive heater shown in figure 1 comprises a stack of plates and spacers having a hollow central portion, one plate being located between two adjacent spacers. The heater of Berthou et al. differs from the device according to the invention in that it comprises only first chambers. Indeed, the heater of Berthou et al. does not include second chambers for the flow of a second fluid, namely because it does not have two plates for defining such second chambers between two adjacent spacers. Moreover, each plate of Berthou et al. comprises one orifice at only one of its ends.

Despite the fact that Berthou et al. disclose parallel and series type flows, these flows occur only in first chambers and not simultaneously in first and second chambers as it is the case in the present invention.

Furthermore, the parallel type flow occurs only when two or more spacers are directly stacked together (see figure 4), the chambers of which communicating one with each other. This parallel type flow never occurs between two adjacent spacers with a plate therebetween.

The heat exchanger shown in figure 8 comprises a stack of plates which define two types of chambers therebetween. This heat exchanger does not comprise any spacers.

The resistive heater and the heat exchanger can be coupled either in "integration" to form a one-piece type assembly (figures 7A and 7B), or in "association" by connecting them by pipes or hoses (figures 9 and 10). In both cases, the heater and the heat exchanger as described above are unchanged.

Therefore, Berthou et al. do not suggest providing two plates between two adjacent spacers so that one of the spacers forms a first chamber therein and the plates form a second chamber therebetween.

Thus, neither Romatier nor Berthou et al. nor any combination of these references do not teach or make obvious the invention defined in independent claim 28 and the claims dependent therefrom.

Accordingly, applicant requests reconsideration by the Examiner, withdrawal of the rejection and formal notification of the allowability of all claims as now presented.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper.

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However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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